



04/2009

Applicability: RETRE, TRIE, TRE, SFE, TRI, TRAINING MANAGER

Effective: Immediate

AVOIDANCE OF HARD LANDINGS DURING ROUTE TRAINING

1 Introduction

1.1 In 2008, a UK operator was involved in a hard landing on a fly-by-wire (FBW) type of aircraft. The flight was from London Gatwick to a popular Greek island, with an en-route technical stop in mainland Greece. The captain was a qualified Line Training pilot. The first officer, a trainee with low hours, mishandled the flare that led to a hard landing. The co-pilot had a history of poor landings on the type. The landing was sufficiently hard to badly damage the undercarriage. Following extensive temporary repairs, the aircraft was ferried gear down to Toulouse.

2 Background

2.1 The approach into the island airport was challenging, as the normal level of flight guidance taken for granted in Western Europe was missing. A pilot flying an approach into such destinations has a much higher workload since the ideal flight path is not always displayed on instruments. Near the ground, it is often challenging to spot a deteriorating situation when a pilot mishandles the flare.

2.2 The difficulties for training captains to swiftly identify inappropriate side-stick control inputs from inexperienced pilots and then to intervene in time, is not unknown to Airbus trainers. However, the position of Line Training captain is often the entry level for a pilot eventually becoming a TRI and TRE with an operator. Pilots initially undertaking this role are relatively inexperienced in recognising and coping with pilot mishandling near the ground.

3 Recommendations

3.1 The following points, arising from the incident, should be considered by instructors and those involved in instructor training:

- Awareness - Trainers operating FBW types with sidestick controls (i.e. no traditional control yoke) should understand that flight deck cues of a trainee pilot's handling/mishandling are less than in conventional types. The absence of a traditional 'yoke' makes assessment of the flare manoeuvre particularly difficult. Trainers should develop a modified scan that should include changes to attitude, idle power selection and, ideally, sidestick movement.
- Formal training - Line trainers should undergo simulator training that covers recognising and coping with handling errors during the landing phase. Training managers are encouraged to plan additional trainer training time as a learning, and hopefully preventative, measure. This should include rehearsals of baulked landing recovery manoeuvres and the taking over of control.
- Pilot training - All pilots should be made aware of recovery techniques from hard and bounced landings, especially on aircraft with sidestick controls. Subsequent cockpit alerts, such as the Take-off Configuration warning that may occur, must be discussed. (The A320 gives a CONFIG warning that is a similar sound to the Fire Warning.)

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4 Queries

- 4.1 Any queries as a result of this Flight Crew Training Notice should be addressed to Manager Flight Crew Standards at the following e-mail address: trainingstandards@caa.co.uk.

Captain David McCorquodale
Manager Flight Crew Standards

26 October 2009

Source Reference: [Air Accidents Investigation Branch Safety Recommendation – 2008-024](#).

Publications affected: Operator part 'D' manuals.

Review: March 2010